

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
9 September 2005 (09.09.2005)

PCT

(10) International Publication Number
WO 2005/083530 A3

(51) International Patent Classification⁷: **G05B 19/418**

(21) International Application Number:

PCT/FI2005/050039

(22) International Filing Date: 18 February 2005 (18.02.2005)

(25) Filing Language: Finnish

(26) Publication Language: English

(30) Priority Data:

20040311 27 February 2004 (27.02.2004) FI

(71) Applicant (for all designated States except US): **METSO PAPER, INC.** [FI/FI]; Fabianinkatu 9 A, FI-00130 HELSINKI (FI).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **LANNES, Petteri** [FI/FI]; Timontie 9, FI-05400 JOKELA (FI). **TIITTA, Jari** [FI/FI]; Kaivolantie 13, FI-04500 KELLOKOSKI (FI). **PYÖTSIÄ, Jouni** [FI/FI]; Niittyranta 1 A 2, FI-00930 HELSINKI (FI). **PITKÄNEN, Tatu** [FI/FI]; Lähteenkuja 1 B 27, FI-04400 JÄRVENPÄÄ (FI). **LACKMAN, Kaarlo** [FI/FI]; Jätkäläntie 6, FI-04400 JÄRVENPÄÄ (FI). **PEKKARINEN, Timo, M.** [FI/FI]; Tasanteenkatu 12, FI-33610 TAMPERE (FI).

(74) Agent: **FORSSÉN & SALOMAA OY**; Eerikinkatu 2, FI-00100 HELSINKI (FI).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

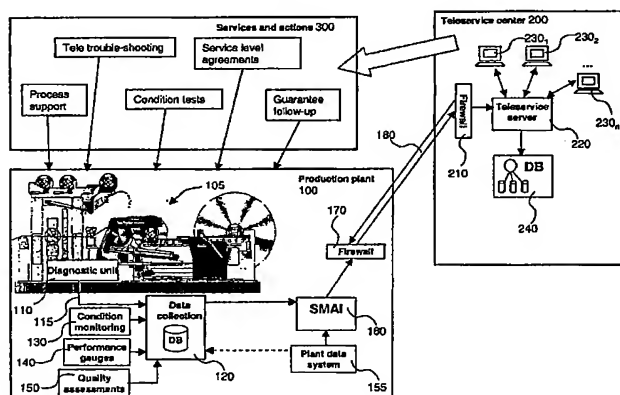
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

[Continued on next page]

(54) Title: METHOD AND SYSTEM IN THE MAINTENANCE OF MACHINES, PROCESSES, AUTOMATION SYSTEMS AND EQUIPMENT RELATING TO PAPERMAKING



(57) Abstract: The invention concerns a method and system in the maintenance of machines, processes, automation systems and equipment relating to papermaking. The machine relating to papermaking is located at a production plant (100), which is equipped with a plant data system (155), and wherein a teleservice connection (189) based on a data communication link is arranged between the production plant (100) and a teleservice center (200). The condition, state and/or performance of the machine units and/or processes and/or automation systems of the production line at the production plant are monitored by monitoring system's, such as condition monitoring systems (130) and/or performance measuring systems (140) and/or quality assessment systems (150) and diagnostic units (110), in order to recognise emergency situations. In the method according to the invention an automatic service process is started in an emergency situation based on the signals given by the monitoring systems. The system according to the invention comprises means for bringing about the automatic service process.



WO 2005/083530 A3



— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(88) Date of publication of the international search report:
27 October 2005

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 G05B19/418		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 G05B		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the International search (name of data base and, where practical, search terms used) EPO-Internal, PAJ, WPI Data		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2002/052715 A1 (MAKI KARI M) 2 May 2002 (2002-05-02)	1, 3, 10, 12-20
Y	the whole document	2, 4-9, 11
Y	EP 0 599 606 A (XEROX CORPORATION) 1 June 1994 (1994-06-01)	2, 4-9, 11
A	abstract column 5, line 29 - line 46 column 6, line 48 - column 8, line 29 column 10, line 40 - column 11, line 36	1, 3, 10, 12-17
A	PATENT ABSTRACTS OF JAPAN vol. 013, no. 471 (P-949), 25 October 1989 (1989-10-25) & JP 01 184599 A (MITSUBISHI HEAVY IND LTD), 24 July 1989 (1989-07-24) abstract	1-4, 10, 12-15
<input type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex.		
* Special categories of cited documents :		
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>*A* document defining the general state of the art which is not considered to be of particular relevance</p> <p>*E* earlier document but published on or after the international filing date</p> <p>*L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>*O* document referring to an oral disclosure, use, exhibition or other means</p> <p>*P* document published prior to the international filing date but later than the priority date claimed</p> </div> <div style="width: 45%;"> <p>*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>*Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>*&* document member of the same patent family</p> </div> </div>		
Date of the actual completion of the international search <div style="text-align: center; font-weight: bold;">18 August 2005</div>		Date of mailing of the international search report <div style="text-align: center; font-weight: bold;">26/08/2005</div>
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer <div style="text-align: center; font-weight: bold;">Salvador, D</div>

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/FI2005/050039

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 2002052715	A1	02-05-2002	FI 990715 A	01-10-2000
			AU 3822000 A	14-11-2000
			CA 2366502 A1	19-10-2000
			CN 1346452 A	24-04-2002
			EP 1166190 A1	02-01-2002
			WO 0062138 A1	19-10-2000
			JP 2002541576 T	03-12-2002
EP 0599606	A	01-06-1994	EP 0599606 A2	01-06-1994
			JP 6214820 A	05-08-1994
JP 01184599	A	24-07-1989	NONE	